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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/611,594      | 06/30/2003  | David R. Johnson     | T-6248              | 2507             |

34014 7590 01/21/2005

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EXAMINER

NGUYEN, TAM M

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1764

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/611,594

Applicant(s)

JOHNSON ET AL.

Examiner

Tam M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-29 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gosselink et al. (5,371,308) in view of Hope et al. (6,395,948)

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Gosselink discloses a process for preparing olefins from a hydrocarbon feed derived from a Fischer Tropsch process. A product stream from a Fischer Tropsch process is first contacted with a non-acidic catalyst comprising molybdenum and nickel in a hydrotreating zone at a temperature of from 100-300° C (212 – 572° F), at a hydrogen partial pressure of from 5 to 150 bars (72 – 2175 psig) and at LHSV of from 0.1 to 5 to remove oxygenates from the product stream. The treated stream is then passed into a thermal cracking zone to produce an olefinic feedstock. The thermal cracking zone is operated at a temperature of from 500 to 1200° C (932 – 2192° C) and at a pressure of from 0.1 to 15 bars. Gosselink also suggests that the olefinic feedstock can be utilized in an oligomerization process. It is noted that Gosselink does not specifically disclose that the hydrotreated stream contains less than 200 or 100 ppmw elemental oxygen. However, the feedstock and hydrotreating step of Gosselink are essentially the same as the claimed feedstock and the claimed hydrotreating step. It would be expected that the hydrotreated stream of Gosselink would contain less than 100 or 200 ppmw elemental oxygen as claimed. Gosselink also does not disclose that the thermal cracking zone is greater than about 10 wt.% of the paraffins present. However, the process of Gosselink is similar to the claimed process in terms of feedstock and operation conditions. Therefore, it would be expected that the thermal cracking zone would have the claimed conversion. (See col. 2, line 9 through col. 4, line 6)

Gosselink does not disclose that a lewis acid ionic liquid catalyst is employed in the oligomerization process.

Hope discloses an oligomerization process wherein a lewis acid ionic liquid catalyst is used. The catalyst comprises (1) aluminum halide and (2) quaternary ammonium or substituted

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ammonium halide wherein the ratio of (1)/(2) is about 1:1 to 2:1. (See col. 1, line 56 through col. 2, line 31).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Gosselink by using the catalyst of Hope because the catalyst of Hope is effective to produce a valuable polyolefins.

Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claim 1 above, and further in view of Anthes et al. (5,000,840).

Gosselink does not disclose the dewaxing step.

Anthes discloses a catalytic dewaxing process wherein the oligomerization product is passed into dewaxing zone to produce lubricant base oil. (See col. 2, line 44 through col. 3, line 30)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Gosselink by passing the oligomerization product to a dewaxing process as taught by Anthes because such process would improve the viscosity, pour point and cloud point of the oligomerized product.

Gosselink does not disclose that F-T derived product includes a diesel product. However, the product of Gosselink/Anthes is similar to the claimed product. It would be expected that the Gosselink/Anthes product would include a diesel product as claimed.

Claims 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims 1-22 above, and further in view of Elomari (6,632,416).

Gosselink does not disclose a hydrofinishing step.

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Elomari discloses a step of hydrofinishing to stabilize a dewaxed product. (See col. 12, lines 1-6)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Gosselink by hydrofinishing the dewaxed product as taught by Elomari because the step would produce a more stable dewaxed product.

Gosselink does not disclose a diesel product is also collected from the hydrofinishing zone. However, the product of Gosselink/Anthes/Elomari is similar to the claimed product. It would be expected that the Gosselink/Anthes/Elomari product would include a diesel product as claimed.

#### ***Response to Arguments***

The argument that Gosselink is intended to produce lower olefins while Applicant's process is intended to yield higher molecular weight products is not persuasive because Applicant does not claim that the olefins are higher molecular weight olefins and the modified process would produce product such as diesel and base oils as claimed.

The argument that the hydroprocessing operation in Gosselink is not necessarily the same as the hydrotreating step of Applicant's invention, since the reference hydroprocessing step encompasses hydrocracking and hydroisomerization as well as hydrotreating is not persuasive because Gosselink teaches that the feedstock comprises a hydrocarbon feed which is hydrotreated to remove oxygenates as claimed and optionally comprises a hydroprocessed oil fraction, which may be produced by hydrocracking and/or hydroisomerization. The feedstock of Gosselink is not necessarily hydrocracked and/or hydroisomerized. In addition, the claimed process does not exclude hydroprocessed oil in the feedstock. (See col. 2, lines 15-22)

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The argument that Applicants specification defines hydrotreating as “a hydrotreating operation in which the cracking conversion is 20 percent or less” is not persuasive because the claims do not claim that the hydrotreating operating is operated at the cracking conversion is 20 percent or less. Also, Gosselink teaches that the hydrogenation is operated without substantial hydrocracking occurring. (See col. 3, lines 16-19)

The argument that Gosselink does not include a polymerization step using an ionic liquid catalyst is not persuasive because the examiner relied upon Hope to teach the claimed polymerization step by using the claimed catalyst.

The argument that the feedstock of Hope is different from the olefinic product of Gosselink is not persuasive because Hope teaches that the feed having one or more alpha-olefins having from 4 to 14 carbon atoms in the molecule can be used in the process and the olefinic product of Gosselink comprises C<sub>4</sub> olefins. Therefore, it would be expected that the olefinic product of Gosselink would be successfully polymerized in the process of Hope.

The argument that Hope does not deal with contaminants of oxygenates in the olefinic feed as claimed is not persuasive because the step of removing oxygenates is taught by Gosselink.

The argument that Anthes and Elomari do not contemplate the production of base oils from Fischer-Tropsch derived olefins and are not concerned with the problems associated with oligomerizing higher olefins is not persuasive because the examiner relied upon Anthes and Elomari to teach that it is known to dewax an oligomerized product to improve the viscosity, pour point and cloud point of the oligomerized product and then hydro-finish the dewaxed product to produce a more stable dewaxed product.

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***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

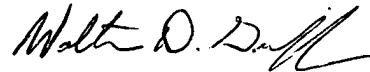


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen  
Examiner  
Art Unit 1764

TN

  
**Walter D. Griffin**  
**Primary Examiner**